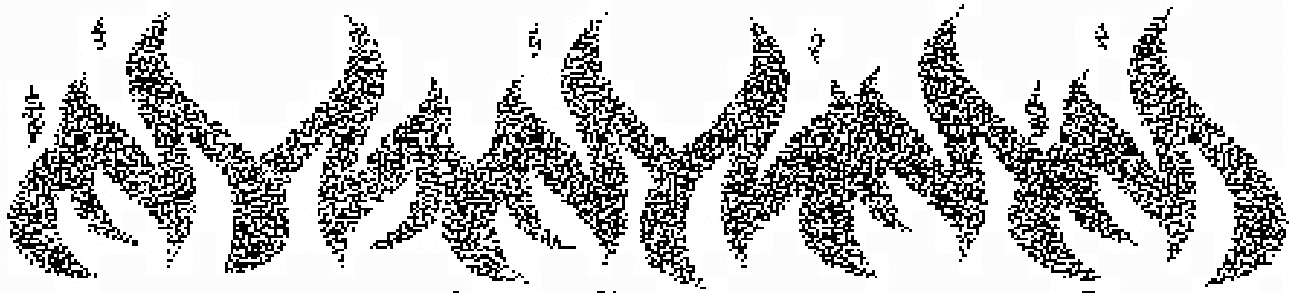


United States Fire Administration



Technical Report Series

SECURITY (BURGLAR) BARS Special Report



Federal Emergency Management Agency



United States Fire Administration

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United States Fire Administration

Major Fire Investigation Program

The United States Fire Administration develops reports on selected major fires throughout the country. The fires usually involve multiple deaths or a large loss of property. But the primary criterion for deciding to write a report is whether it will result in significant 'lessons learned.' In some cases these lessons bring to light new knowledge about fire — the effect of building construction or contents, human behavior in fire, etc. In other cases, the lessons are not new, but are serious enough to highlight once again because of another fire tragedy. In some cases, special reports are developed to discuss events, drills, or new technologies or tactics that are of interest to the fire service.

The reports are sent to fire magazines and are distributed at national and regional fire meetings. The reports are available on request from USFA. Announcements of their availability are published widely in fire journals and newsletters.

This body of work provides detailed information on the nature of the fire problem for policymakers who must decide on allocations of resources between fire and other pressing problems, and within the fire service to improve codes and code enforcement, training, public fire education, building technology, and other related areas.

The Fire Administration, which has no regulatory authority, sends an experienced fire investigator into a community after a major incident only after having conferred with the local fire authorities to insure that USFA's assistance and presence would be supportive and would in no way interfere with any review of the incident they are themselves conducting. The intent is not to arrive during the event or even immediately after, but rather after the dust settles, so that a complete and objective review of all the important aspects of the incident can be made. Local authorities review USFA's report while it is in draft form. The USFA investigator or team is available to local authorities should they wish to request technical assistance for their own investigation.

For additional copies of this report write to the United States Fire Administration, 16825 South Seton Avenue, Emmitsburg, Maryland 21727 or via USFA WEB Page at <http://www.usfa.fema.gov>.

SECURITY (BURGLAR) BARS

Special Report

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Federal Emergency Management Agency



United States Fire Administration

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EXECUTIVE SUMMARY

Burglar bars, also known as security or window bars, can be found on any type of structure—single-family home, apartment building, storefronts. The bars provide a visible sign of security serving as both a deterrent to potential burglars, and a reassurance to those who had the bars installed. However, burglar bars can also be dangerous, preventing residents and other occupants from escaping in the event of a fire and leading to fatalities.

Based on data obtained from the National Fire Incident Reporting System (NFIRS), on average about 25 civilians are injured or die each year in fires where escape is compromised by unauthorized bars or gates. The actual numbers may be larger than that, due to the fact that the presence of burglar bars is not always collected in a way that is recorded by NFIRS (e.g., written in text but not coded). The most recent version of NFIRS, version 5.0, allows for the collection of data concerning burglar bars; however, data from the new version is not yet available.

Most fatalities/injuries involving burglar bars occur in residences, when people become entrapped by the very bars that are supposed to protect them. Children, the elderly, the mobility impaired, and firefighters are especially vulnerable. The bars also can hamper rescue efforts, especially the efforts of those who arrive before public safety personnel.

Due to the fire egress risk posed by burglar bars, most building codes regulate their installation/use. Several states have passed legislation specific to burglar or security bars. Generally, the codes and legislation require that burglar bars have some form of quick-release mechanism, enabling rapid escape *in case of fire*. Furthermore, the National Fire Protection Association (NFPA) Life Safety Code 101 addresses the risk posed by unauthorized bars, stating that a window or other means of escape should be operable from the inside “without the use of tools, keys, or special effort.”

The cost of retrofitting or replacing existing burglar bars, along with a lack of awareness, has hindered the compliance to these regulations. The fear of burglary, theft, and/or physical attack presents a greater perceived risk with people than the threat of fire, especially among those who have been previously victimized.

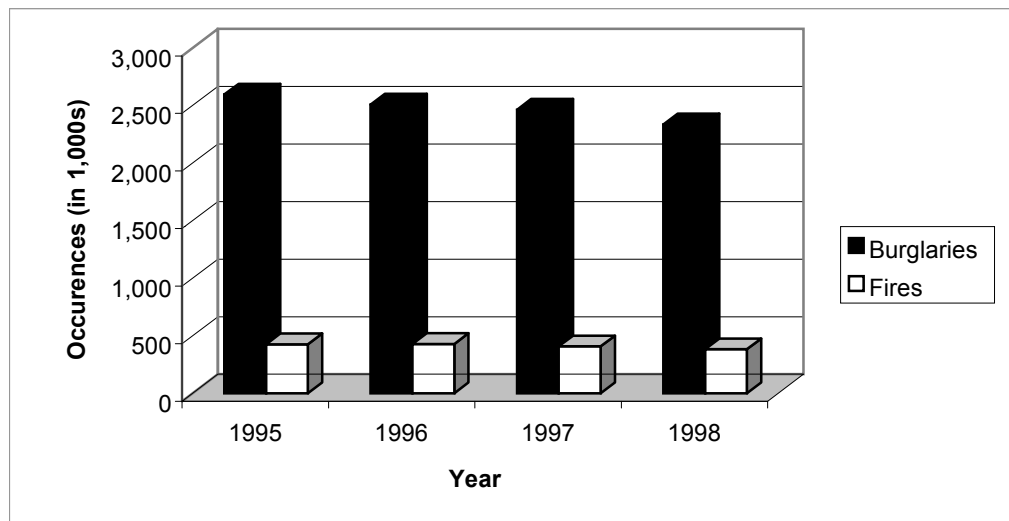
Several fire departments have experienced success in reducing the presence of *unsafe* bars by actively working with the public to provide information about the devices. The public can be educated actively (door-to-door information), passively (websites, posters, etc.), and at points-of-sale. While pre-planning in neighborhoods, firefighters should note structures that have burglar bars on their windows/doors, and make a note of them for use in a response. They may also consider proactively providing safe practices information to the location noted.

While burglar bars may slow rescue they are not impenetrable. Fire departments have found success with a variety of strategies to gain entry, or prepare a route of egress, through burglar bars.

INTRODUCTION

Many people feel they have a greater risk of being robbed than of being trapped in a fire. Reports in the media tend to accentuate this fear, as robberies are generally more well-publicized than fires. According to the Uniform Crime Report compiled by the Federal Bureau of Investigation, over two million people, or 18 percent of the population reporting, were burglarized in 1998. According to information provided by NFIRS, that same year only 381,000 residential fires were reported. Comparative information for burglaries and fires from 1995-1998 can be found in Figure 1.

Figure 1. Burglaries vs. Residential Fires



Burglar bars are used as a visible reminder of security. In many cases where bars are used, residents have had personal experience as a victim of robbery, while having had little to no experience as the victim of a fire. *The threat of being burgled or having their residence broken into is more real to them than the threat of being trapped in a fire.* Burglar bars provide a quick, obvious, and relatively easy solution. The presence of non-compliant burglar bars—those not consistent with modern code—results in many difficulties. The hazards primarily affect those who live behind them, but can affect both civilian and fire department rescuers once a fire has started.

The installation of the bars leads to the creation of a prison-like condition—the occupants may feel safe, but they have severely limited their avenues of egress. By blocking windows with bars, they are ensuring that alternative escape paths through windows are no longer an option.

In addition to those who have recently installed unsafe burglar bars (not code-compliant), there are homes that have had burglar bars since before any legislation came into effect governing their installation and safety. Most legislation governing the installation/use of burglar bars was enacted after 1993; burglar bars installed prior to that year are most likely not compliant with current legislation. Despite the fact that such legislation is often retroactive, many homes are not retrofitted because of the cost involved in making existing installations compliant. It may cost up to \$300 per window to either install compliant bars, or to retrofit existing ones. In contrast, the cost of installing unauthorized bars may be no more than \$100 per window.

Enforcement of codes relative to burglar bars, while important, often is not a top priority for building officials or fire inspectors, and so property owners are often unaware or non-compliant with such laws. Most homes are not re-inspected once built, unless they undergo major renovation. Immediately after fires involving fatalities, enforcement of burglar bar codes often increases sharply. However, due to other demands on inspector's time (e.g., new construction, public assembly properties), the enforcement of the laws often fades. While most legislation is drafted in the wake of multiple-fatality fires involving bars, public demand for the passing of such legislation often diminishes as the memory of the fire tragedy fades.

The occupant's risk from the unsafe burglar bars is compounded greatly where there is no working smoke alarm. With the early warning provided by a working smoke alarm, people have a chance to extinguish an incipient fire or leave through exits. Anecdotal evidence suggests that when there are multiple fatalities due to burglar bar entrapment, there often is not a working smoke alarm. It should be noted that the model building codes will often require smoke alarms be installed in dwellings where security bars have been installed.

Several firms offer "aesthetically pleasing" burglar bars that have been treated or coated with a substance so that they do not detract from the overall appearance of the house. These aesthetic enhancements are designed to increase the appeal of burglar bars for property owners.

Just as burglar bars keep criminals out, they also keep rescuers out. Neighbors of victims entrapped by bars frequently state that they tried to rescue the people as they called for help, but were denied entry due to the presence of burglar bars. Pry bars, axes,

even car jacks have been known to be used by neighbors in an attempt to gain entry to assist victims prior to the arrival of fire department units...sometimes with success, often without. Regardless, the bars often significantly delay entry into the structure, and rescue, by neighbors.

The bars also provide a substantial challenge to fire suppression and rescue efforts. Entry by firefighters should be delayed until at least one set of bars has been removed on each level (and, ideally, each side) of the structure, providing an emergency escape route for occupants and responders. Command/safety officers should relay the location of the emergency egress points to interior attack crews and rapid-intervention teams.

Pre-planning is a crucial key to speeding up action on a fire ground. Anytime a unit is “on the air,” be it during driving training or an administrative function, personnel should try to pay attention to the buildings with security bars in their first due area. Any notation about burglar bars on a structure should be shared with all firefighting personnel responsible for responding to that structure, including second due and mutual aid companies. For example, information could be noted on dispatch cards and relayed to responding companies.

Having a coordinated plan for the removal of bars on a structure can result in speedier rescue and fire suppression. Notations about which structures are known to have burglar bars should be kept in a central, easily accessible location for ready reference when responding to an incident. Data collected might be stored in a computer-aided dispatch system, a map book, or a neighborhood information book. If possible, firefighting personnel should target the neighborhood surrounding a structure with burglar bars as an area for fire prevention and safety education, and as a location where smoke-alarm checks and installation should be performed.

Burglar bars should be specifically looked for during arrival and size-up on the fireground. Due to the hazards presented by the bars, firefighters need to be cognizant not only of the presence of bars on the fireground, but how the bars are assembled and attached to the building. Observing the characteristics of the bars and their installation will assist in deciding how best to remove them. It is important for responders to be aware of what is contained in some of these architectural touches as part of their pre-planning, so that rescuers are not facing unforeseen challenges when trying to gain entry

to the structure on fire. Department training personnel or training officers should consider establishing standard operating procedures and training-related activities targeted at the removal of burglar bars using forcible entry tools.

CASE STUDIES

Despite the best efforts of fire department personnel and legislators, civilian fire fatalities as the result of burglar bars continue to occur. The burglar bars are just one of a series of factors contributing to the fire deaths; nevertheless, they often are the final step in a chain of events that led to a preventable deaths. The following are some representative cases, including ones that occurred as this report was being written. Just these eight fires killed 19 people, and came close to killing more. They are all relatively recent, and can be used to illustrate the need for enhanced vigilance by building/code officials, tactical consideration, and public education.

1. Detroit, MI—3 killed in duplex – December 26, 2001

Three children were killed, and another three people were injured, after an early-morning fire broke out in their duplex. Burglar bars on the windows prevented escape, and thwarted any rescue attempts by neighbors.

The deceased, ages 17, 11, and 5 months, were siblings who were all trapped and killed by the fire. The survivors were a 15-year-old girl and a 4-year-old girl, and the mother of the children. The mother, trapped on the roof of the duplex, threw her 4-year-old daughter down to rescuers, and then jumped from the roof. The 15-year-old girl was pulled from the fire by a neighbor.

The duplex, which housed two families, was heavily damaged; two neighboring houses were also damaged. At the time of this report, there was no indication of cause, or whether the duplex had working smoke alarms.

2. Baton Rouge, LA—3 children injured – December 12, 2001

Three siblings were rescued from a house fire by a neighbor who pried burglar bars off the door to their house. The children, ages 6, 4, and 3, were home alone at the time of the fire, and were found unconscious in the rear of the house suffering from severe smoke inhalation.

Neighbors noticed the fire and, after calling 911, began attempting to rescue the children. One neighbor instructed the children to go to the rear of the house if the fire started to come near them, while another began to tear the burglar bars from the door of the house. By the time the fire department arrived, the bars had been pried off of

the door, and the door kicked in. Fire department spokesmen credited the actions of the neighbors with saving the lives of the children. A cause was not given for the fire.

3. Houston, TX—4 killed in single-family home - July 3, 2001

Four people were killed, and another five injured, after an early-morning fire broke out in a single-family house the day before the 4th of July. The home did not have a working smoke alarm, and several doors and windows of the house had been blocked with burglar bars. The bars were secured with a key, and did not have the quick-release mechanism required by City of Houston ordinance.

The deceased, ages 30, 16, 13, and 4, were found in a back bedroom of the house, and died of smoke inhalation. The 30-year old had initially escaped with two of her children, but returned to the house to try to save the other children. It appears that she became overcome trying to get back out of the house. The victims were found near a window, leading investigators to theorize that they were trying to escape that way, however, the window was blocked by burglar bars. The woman's mother escaped with two other children.

Neighbors reported that they had tried to gain entry to the house, but heavy fire through the front door prevented entry via that route. Burglar bars blocked entry through windows. The fire, started by one of the children playing with a fireplace lighter, was quickly extinguished upon the arrival of firefighters.

As a result of the fire, firefighters went door-to-door throughout the neighborhood to check smoke alarms, warn residents of the dangers of burglar bars, and hand out fire safety information. Residents were advised to conduct Exit Drills in the Home, practicing opening burglar bars.

4. Houston, TX—3 killed in single-family home - June 20, 2001

One person was injured and three killed after a fire broke out in their home at 3:00 a.m. A 65-year-old female, a wheelchair-bound 70-year-old male, and a 42-year-old male all died from smoke inhalation, suffered after they were trapped in their home by burglar bars. A 44-year-old female survived, although she too suffered from smoke inhalation. The fire is reported to have spread rapidly through the house, which did not have working smoke alarms.

Neighbors reported hearing the family scream for help, but were unable to gain entry to the house due to heavy fire and burglar bars. One neighbor reportedly tried to pry the bars off, but was unsuccessful. The bars did not comply with city ordinances mandating quick-release bars. City officials canvassed the neighborhood in the wake of the fire, providing information on burglar bars and smoke alarms to neighbors of the victims.

5. Tampa, FL—2 injured in residential duplex - April 3, 2001

Two people were rescued by firefighters after fire broke out in their apartment. The front of the duplex was well-involved, with fire blocking the primary entrance to the building. Police officers reported that two people could be heard calling for help, leading firefighters to mount a rescue effort. Firefighters used a sledgehammer to break through burglar bars on the rear window of the apartment and gain entry to the building. The two victims, a 47-year-old female and a 52-year-old male, were removed from the building and transported to the hospital.

The duplex did not have a working smoke alarm. Although both victims recovered, and were released from the hospital three days after the fire, this incident narrowly avoided another tragedy.

6. Shreveport, LA—1 injured in single-family home - April 1, 2001

Eight of nine residents escaped a house fire, which started in the front living room of the house. The ninth resident, a nine-year old boy, was trapped in the house by burglar bars. The boy's father was able to pry the bars off of the window; however, by that time the boy succumbed to from smoke inhalation, and burns to his face, upper body, and hands.

Firefighters arrived to find all occupants of the house out, but the house fully involved. The house did not have quick-release burglar bars, and lacked a working smoke alarm.

7. Lafayette, LA—5 killed in single-family home - December 24, 2000

Five people, a 52-year-old female, a 21-year-old male, a 9-year-old male, a 7-year-old female, and a 4-year-old male were all killed due to a fire caused by the kitchen stove. The stove, which had had two burners left on to provide heat for the house, caused the

kitchen to catch fire; the fire then spread to the rest of house. An adult male was rescued, although he suffered severe burns.

Security bars on the house were equipped with latches. The type of latch was unspecified in the investigative report. The family was unable to open them either due to panic or confusion. Neighbors were able to pry the bars off of the front door, resulting in the rescue of the adult male. Additionally, furniture was found to be blocking one of the windows of the house.

Firefighters arrived to find the house well involved, with heavy fire preventing rescuers from making entry into most of the house. There was no report of a working smoke alarm.

8. New York City, NY—2 killed in apartment - December 23, 2000

Two children died of smoke inhalation, and their parents were critically injured, after the family Christmas tree caught fire. The family lived in an apartment whose window to the fire escape was blocked by a padlocked gate. The gate was non-compliant. The family and several of their neighbors had them installed to prevent burglars from entering from the fire escape.

Despite the fact that several laws had been proposed in New York City to reduce the number of locking window gates, none of the laws had been passed. Enforcement of the laws currently in use in New York is difficult, due to the fact that the tenants are often the ones installing the unauthorized bars.

9. Chicago, IL—3 killed in single-family home - October 20, 1999

A woman and her two grandchildren were killed after the woman ran back into her home to save the children. The fire, reported to have been caused by candles burning in the basement and a faulty boiler, spread rapidly through the house, preventing neighbors from entering through the door. Windows were covered with burglar bars, which neighbors unsuccessfully tried to remove in a rescue effort. The burglar bars lacked quick-release mechanisms and objects in the house may have also blocked egress.

10. San Antonio, TX—2 killed in single-family home - September 28, 1998

Two people died and three more were seriously injured after being trapped by burglar bars. Neighbors were unable to rescue a three-year-old male and a twenty-three month old infant due to heavy fire and burglar bars. An adult male, also trapped in the house, survived although he was seriously burned over fifty percent of his body.

A teen-age female and a five-month old female, also trapped by burglar bars, were rescued after a neighbor used a sledgehammer to gain entry through the back door of the house. Both suffered from smoke inhalation, but otherwise were not seriously injured.

The burglar bars did not have quick-release mechanisms; there was no report of a working smoke alarm.

Despite the dangers presented by unsafe burglar bars, they continue to be installed across the country. Fearful residents see them as a saving grace against having possessions stolen, or being assaulted in their home. However, residents often fail to see the *fire-related* danger presented by these bars until it is too late. Even if residents do see the danger, the fear of having their home robbed often outweighs their fear of fire. The next section addresses what can be done to deal with the problems illustrated by the case studies.

PUBLIC EDUCATION

Burglar bars are a common security measure taken by homeowners and tenants across the country. Although building codes and many states and municipalities have strict codes governing the sale and installation of burglar bars, they continue to be a problem because of a lack of education of the public about the units, and the alternatives available.

Despite the best efforts of fire personnel to educate the public through the Internet, pamphlets, and face-to-face discussions, many citizens remain unaware of the hazards associated with unsafe burglar bars and the laws regulating them. Departments should consider developing a citizens awareness program, incorporating not only the fire department but local building code and fire inspection officials, to increase the public's awareness of these dangers.

Public education and enforcement of existing codes and legislation must continue to be the focus of firefighters in their efforts to reduce fire injuries and death as a result of burglar bars. Effective pre-planning, and familiarity with the most effective ways to remove burglar bars to gain entry, can also work to reduce the number of deaths.

Sources of Information

The United States Fire Administration (USFA) and the National Fire Protection Association (NFPA) both provide public education information and materials on the dangers of burglar bars. The USFA offers a document entitled "Fire Safe and Secure: A Factsheet on Security Bar Safety." The fact sheet lists six tips to help reduce the number of fire injuries and deaths associated with security bars on windows and doors preventing escape. The tips include using quick-release devices on barred windows or doors, retrofitting current bars, and being aware of issues resulting from the presence of security bars during fire escape drills. A copy of the fact sheet is provided in Appendix A and may be ordered by contacting the USFA at <http://www.usfa.fema.gov>.

The NFPA's Center for High-Risk Outreach has published a report on burglar bars, and offers a community information packet on their risks. Information can be obtained by visiting the NFPA's website at <http://www.nfpa.org>.

Professional organizations representing manufacturers and sellers of burglar bars provide information on the hazards associated with burglar bars on their web pages. For example, the National Burglar and Fire Alarm Association (NBFAA) includes information on the dangers of burglar bars under its statistics section (http://www.alarm.org/Industry/Statistics/Burglar_Bars/burglar_bars.html).

Some local fire departments such as Houston, TX, and Los Angeles, CA, have taken information contained on the above web pages and added it to their own websites. Included as part of their information on fire safety, the pages provide a brief yet comprehensive overview of the primary dangers associated with the presence of unsafe burglar bars. These web pages also provide information to the public on local laws governing the types of burglar bars.

The American Red Cross offers information on the dangers of burglar bars under the disaster services section of its website (<http://www.redcross.org/services/disaster/>). Bearing in mind that many people do not have access to the web, fire departments should consider other ways to educate the public. Providing information at an annual open house is one method for doing this, although it relies upon citizen-driven initiative. A more proactive strategy would be to utilize door-to-door information campaigns in conjunction with smoke alarm programs or home fire safety programs in high-risk areas.

Pamphlets continue to be a useful tool in public education and information campaigns, especially when produced in several languages and made readily available to the public. The Metropolitan Tenants Organization in Chicago, IL provides information on burglar bars in a pamphlet provided to renters. The pamphlets inform tenants of their rights and responsibilities regarding security mechanisms, and are available in several languages.

Information may also be available from insurance companies. State Farm Insurance Company also offers pamphlets outlining the risks involved in the use of unsafe burglar bars (Appendix B).

CODES AND LEGISLATION

Awareness of the dangers posed by burglar bars has increased over the past decade, in part due to several multiple-fatality fires. Various building codes address the installation of burglar bars, and several states and municipalities have passed legislation concerning the bars.

Codes

Several model building and fire codes address the dangers posed by the installation of unsafe security bars. Table 1 lists these codes, their edition, and the location of the relevant section.

Table 1. Model building and fire codes

Model Code	Edition	Section
Standard Building Code	1997	1005.5
Standard Fire Prevention Code	1997	802.1.6.1
Uniform Building Code	1997	310.4
Uniform Fire Code	1997	1206
BOCA National Building Code	1997	1010.4
BOCA National Fire Prevention Code	1997	F-609.3
International Building Code	2000	1009.4
International Fire Code	2000	1009.4
International Code Council Performance Code for Buildings and Facilities	2001	1901

Unobstructed means of egress are also addressed in NFPA 101, the Life Safety Code. Chapter 24.2, Section 24.2.2.3, Secondary Means of Escape, states, “[the means of escape] shall be an outside window or door operable from the inside without the use of tools, keys, or special effort and shall provide a clear opening of not less than 5.7 ft².”

Legislation

Several states have recognized the importance of legislation governing where and what types of burglar bars may be used. State building regulations have long referenced the model codes. Many states are concerned enough about the problem to have taken the

step of creating a separate code governing burglar or security bars, since the model codes are not mandatory and may not be in effect everywhere in their state. In addition to the state laws, some cities have enacted their own regulations. Based on building codes for cities, these regulations frequently echo the language found in state codes. Examples of state legislation on burglar bars are given below.

Mississippi

In 1993, the State of Mississippi passed House Bill 1678. The bill came about as the result of a fire in Bruce, MS, where seven people were killed due to entrapment by burglar bars. Mississippi Code, Title 45, Chapter 11 *Fire Protection Regulations, Fire Protection and Fire Safety in Buildings*, cites the Standard Building Code while addressing the sale of burglar bars. Specifically, § 45-11-71 states, “In the interest of public safety, any person who engages in the sale of burglar bars to the public shall comply with 1105.7 of the Standard Building Code of the Southern Building Code Congress International, as revised.”

Section 45-11-73 provides the State fire marshal with the authority to promulgate rules and regulations concerning the sale of burglar bars. However, the section also provides an exception by stating, “These rules and regulations shall apply except in any county or municipality which has adopted the Standard Building Code of the Southern Building Code Congress International, with standards not less stringent than the Mississippi Fire Prevention Code.”

Finally, in § 45-11-75, the State provides for a penalty for violation. Upon conviction of a violation of the regulations governing the sale of burglar bars, the violator is to be fined no more than \$1,000. However, the section goes on to state, “[I]n the case of continuing violations without reasonable effort on the part of the defendant to correct such violations, each day of violation thereafter shall be a separate offense.”

Mississippi’s code, while brief, provides a flexible framework in which to regulate the sale of burglar bars.

California

The current California law was introduced as a direct result of a fatal Oakland house fire in 1995, in which five children died. The resulting law, found in California Health and Safety Code, Section 13113.9 references the California Building Standards Code's requirements for fire safety, but also includes further requirements for those selling or installing burglar bars:

13113.9 (c) Burglar bars shall not be sold in California at wholesale or retail unless the burglar bars are either labeled or their packaging contains the warning information specified in the regulations adopted pursuant to subdivision (b).

13113.9 (d) Any contractor or installer of burglar bars shall provide the owner of the residential dwelling a copy of the warning information required pursuant to subdivision (b) prior to installing burglar bars.

In California Health and Safety Code, Section 13114.1, the State Fire Marshal is given the authority to “[P]repare and distribute for use by local agencies, community groups, and private firms, public education materials about the dangers of unsafe burglar bars.” The materials are to be provided in a variety of languages and formats, including “Braille, 18-point type, cassette tape, and computer disk for those who are print impaired.” An example of public education material prepared by the State can be found in Appendix C of this document.

Section 13114.2 (a) directs the State Fire Marshal to “adopt regulations and standards to control the quality and installation of burglar bars and safety release mechanisms.” Section 13114.2 (b) further states, “[N]o person shall install, market, distribute, offer for sale, or sell burglar bars and safety release mechanisms for emergency escape/rescue windows or doors in this state unless the burglar bars and safety release mechanisms have been approved by a testing laboratory recognized by the State Fire Marshal.”

Section 13114.3 of the California Health and Safety Code limits the installation of burglar bars on buildings owned or leased by a public agency (defined as a state agency, department, board or commission; the University of California; and a local agency). Specifically, “[N]o burglar bars shall be installed or maintained on any residential dwelling that is owned or leased by a public agency, unless the burglar bars meet current state and local requirements, as applicable, for burglar bars and safety release mechanisms.”

Finally, § 13114.5 allows, “The governing body of any city or county [to] enact ordinances or laws imposing restrictions greater than those imposed by Sections 13113 and 13114.”

Texas

Like California, Texas has a thorough state code governing burglar bars or, as they are called in the Texas code, security bars. Found in Chapter 756 of the Health and Safety Code, Subchapter F clearly delineates the regulations governing the installation of security bars on bedroom windows and doors.

Section 756.082, Security Bars on Residential Dwelling, states,

A person may not install security bars on a door or window of a bedroom in a residential dwelling unless:

- (1) the security bars on at least one door or window in the bedroom have an interior release mechanism; or
- (2) at least one window or door from the bedroom to the exterior may be opened for emergency escape or rescue.

Like California, Texas has a labeling requirement for security bars. Per Section 756.083, security bars sold in the state must be labeled, “in accordance with rules adopted by the state fire marshal. The required label must state the requirements of Section 756.082.” Section 756.083 further states, however, “A person who is not regularly and actively engaged in business as a wholesale or retail dealer may sell or offer to sell security bars in this state provided that proper written notice of the requirements of section 756.82 is provided to the buyer in a form approved by the state fire marshal.”

Subchapter F of Chapter 756 also addresses the recommended release mechanism for the security bars. Under § 756.084 (a), “The state fire marshal or a testing laboratory under conditions and procedures approved by the state fire marshal may recommend an interior release mechanism that has been shown to be effective.” Section 756.084 (b) adds, “The state fire marshal shall adopt rules to implement this section.”

Despite the presence of legislation and building codes, burglar bars still present a challenge to firefighters. The next section addresses common tactics for the removal of burglar bars on the fire ground.

TACTICS TO DEAL WITH BARS

Burglar bars are designed to prevent entry, even by forcible means. This limits the tools that can be used to effect quick entry into a structure. Traditional forcible entry tools (flathead axe, Halligan bar) might be used, but they require a significant amount of time and effort to be successful.

The Fourth Edition of Essentials of Firefighting, published by the International Fire Service Training Association (IFSTA), addresses the challenge posed by burglar bars. Chapter 8, 'Forcible Entry,' states, "Forcible Entry through burglar bars is a difficult and time-consuming task." The book then suggests three methods for the removal of burglar bars:

- Using a flat-head axe and a Halligan-type bar to shear off the bolt heads of the bar assembly (if the bolt heads are visible)
- Using a circular saw to cut either the bar assembly or its attachments
- Using an oxyacetylene torch to cut the bar assembly

Shearing off the bolt heads securing the bars to a structure can be accomplished using forcible entry tools. By using the blade of the axe as a wedge, and the Halligan bar as the hammer to force the wedge between the bolt head and the wall, the bolts holding the bars to the wall can be removed. While effective, this method can be time consuming. The difficulty lies in how the bars are mounted to the exterior wall of the structure in question.

Another effective method for the removal of the bars is to utilize a circular cut-off saw, outfitted with a carbide-tip or metal-cutting blade rated for fire/rescue work. Firefighters can use the saw to cut through the bars. This process also takes time.

The use of an oxyacetylene torch is faster than the methods presented above, but most first-line firefighting apparatus do not carry the necessary equipment. If a fire department does carry a torch on its apparatus, firefighters need to be familiar with its use in cutting through burglar bars for that approach to be effective.

In extreme circumstances, such as firefighter entrapment, burglar bars can be removed from a structure using a piece of apparatus (truck) and a chain or cable. However, there are several related safety hazards associated with this tactic—it should only be employed when there is an immediate life safety risk, and not enough time to remove the bars through alternate means. This method poses a danger to the fire department personnel operating on the scene, as the bars are removed in an uncontrolled manner. Safety officers and other personnel operating near the bars should be cognizant of the hazards associated with the force used to remove the bars and the likely recoil; there is a risk of partial structural collapse due to the stress exerted on the building. In addition, this method possesses the likelihood of damaging the structure and/or the apparatus used. Furthermore, there often is not enough room for the apparatus to operate in, or the bars are located on an upper story of a building. **Special care needs to be taken to ensure that appropriate safety precautions are followed when this potentially hazardous method is used.**

CONCLUSION

Burglar bars continue to constitute a deadly problem across the nation, presenting a variety of challenges to building officials, public fire education initiatives, and tactical response. So long as unsafe burglar bars are found on structures, they present a danger to firefighters and occupants alike.

Firefighters can protect themselves by pre-planning their response areas, and by practicing efficient methods for removing bars. Firefighters can protect the citizens in their first-due area by working to educate the residents. Passive means, such as websites, can be used to provide a readily accessible information point on legislation, building codes, and dangers. Proactive measures, such as door-to-door tours of the neighborhood, can be used to provide information to those who do not have access to the web. Citizen groups, either existing or newly created, could incorporate fire department, building code, and fire inspection personnel to educate their members of the dangers of unauthorized burglar bars.

The best weapons against unsafe bars are effective pre-planning, targeted public information, and aggressive code enforcement.

APPENDIX A

USFA Fact Sheet

“FIRE SAFE AND SECURE: A FACTSHEET ON SECURITY BAR SAFETY”



Fire Safe and Secure

More than 4,000 Americans die each year in fires, and more than 25,000 are injured. Security bars may help keep your family safe from intruders, but they can also trap you in a deadly fire!

The United States Fire Administration (USFA), a division of the Federal Emergency Management Agency (FEMA), encourages individuals to use the following tips to help reduce the number of fire injuries and deaths associated with security bars on windows and doors preventing fire escape.

Use Quick Release Devices On Barred Windows and Doors

Windows and doors with security bars should have quick release devices to allow them to be opened immediately in an emergency. These devices operate from inside and allow the bars to be opened for emergency escape without compromising the security of your home. The quick release devices should be easy to open without the use of a key, detailed knowledge or great physical effort. Release devices vary by region and manufacturer. Contact your local fire department on a non-emergency number for information on approved release devices available in your area.

Consider Retrofitting Current Security Bars

Security bars on windows and locked doors prevent escape from fire and also impede firefighters' rescue attempts. If the security bars in your home are permanently fixed or do not have quick release devices, they should be retrofitted with release devices.

Be Aware Of Security Bar Issues When Practicing Fire Escape Routes

Know and practice fire escape plans monthly, and use them to identify and correct obstructions of windows and

doors needed for escape from a deadly fire. Make sure that windows are not stuck, screens can be taken out quickly and that security bars can be properly opened.

It is important that everyone in the family understands and practices how to properly operate locked or barred windows and doors. Windows should open easily and be wide enough to allow escape, and locked or barred doors should operate quickly and easily.

Plan Two Exits Out Of Each Room

The best escape plans have two ways to get out of each room. If the primary exit is blocked by fire or smoke, you will need a second way out. A secondary route might be a window onto an adjacent roof or an Underwriter's Laboratory (UL) approved collapsible ladder for escape from upper story windows.

Designate A Meeting Place Outside and Take Attendance

Designate a meeting location away from the home, but not necessarily across the street. For example, meet under a specific tree, at the end of the driveway, or on the front sidewalk to make sure everyone has gotten out safely. Designate one person to go to a neighbor's home to phone the fire department.

Once Out, Stay Out

Remember to escape first, then notify the fire department using the 911 system or proper local emergency number in your area. Never go back into a burning building for any reason. Teach children not to hide from firefighters.

Finally, having working smoke alarms installed on every level of your home dramatically increases your chances of survival. Smoke alarm batteries need to be tested every month and changed with new ones at least once a year. Also, consider replacing the entire smoke alarm every ten years, or as the manufacturer guidelines recommend.



For More Information Contact:
The United States Fire Administration
Office of Fire Management Programs
16825 South Seton Avenue
Emmitsburg, MD 21727

Or visit the USFA website:
www.usfa.fema.gov

Visit our Kid's Page:
www.usfa.fema.gov/kids



APPENDIX B

State Farm Insurance Brochure

**“Security bars stop criminals...and possibly your escape from
fire”**



Security Bars

Stop Criminals...*and* Possibly

**Your Escape
From Fire!**

Window Security Bars Without Release Devices Can Trap You in a Deadly House Fire

The stories are tragic. Small children trapped inside burning homes separated from safety and rescuers by security bars. In the past decade, there have been many horrific incidents of people being trapped in fires. For example: Nine family members died in a house fire in East Palo Alto, Calif. Four children met a similar fate in Tampa, Fla. And, a Bessemer, Ala., family of five perished as their home burned, trapped behind permanently installed security bars.

While the number of fire deaths in America is on the decline, the National Fire Protection Association (NFPA) notes the number of fire deaths related to improper security bars is on the rise. The possibility of more tragedies involving children and adults is very real. This is why State Farm Insurance is working with the NFPA and local community groups to bring attention to this important issue.

Crime Protection and Fire Safety

Security bars on a home's windows can provide peace of mind to those who fear being a victim of crime. In neighborhoods across the United States, the sight of homes with security bars reveals the crippling fear many people live with daily.

There are ways to both increase your home's security from criminals and lessen the chances a family member could be trapped.



Quick-release Security Bars

To reduce the danger of being trapped by security bars inside a burning home, replace any fixed burglar bars on windows with quick-release burglar bars. These allow emergency evacuation in the event of a fire.

Quick-release devices operate from inside a house and allow the security bars to be opened by the occupant for emergency escape. Every family member should be able to open quick-release security bars without the use of a key, special knowledge or effort. There are several different types of releases available. Check with the fire department in your community to see which available devices are approved for your area.

State Farm generally does not recommend the use of fixed security bars. If they are used in a residential setting, they should have quick-release devices that will allow an escape.

Why is Such a Lifesaving Idea Being Ignored?

At this time only a handful of communities are addressing the dangers of permanently installed security bars. You can help your community by:

- ☐ Calling or writing your government representatives to ask their support for local or state proposals ensuring security bar safety.



- ☐ Questioning local building and public housing officials on the status of security bar regulation in your community.
- ☐ Encouraging government and social service officials to find funding for retrofitting security bars with quick-release devices.
- ☐ Asking your local fire department for a presentation on security bars and fire safety.

The National Fire Protection Association and State Farm Urge You to Make a Plan to Escape a Burning Home.

- ☐ Draw a simple floor plan of your home and identify two ways to get out of each room.
- ☐ Install at least one smoke alarm on every level of your home and near all sleeping areas. Check your alarm by pushing the test button monthly.
- ☐ Make sure doors, windows and security bars can be opened easily from the inside.
- ☐ Choose a special meeting place for all family members outside and in front of the home.
- ☐ Practice your plan with a home fire drill at least twice a year.



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APPENDIX C

State of California Fact Sheet about Burglar Bars “Security/Burglar Bar Facts”

Security/Burglar Bar Facts

The Problem

Security bars, or burglar bars as they are often called, when installed without quick-release mechanisms, trap victims during fires and can make rescue impossible. In 1995, five children died in an Oakland house fire because of burglar bars that could not be opened. This led to the introduction of AB 3131 and AB 3026. Both bills were signed into law by Governor Pete Wilson and became law in 1996.



AB 3131

- Requires that all security bars sold in California be packaged with prominent labeling on the bars, or on the package, or on both, directing the consumer or installer to contact the local fire department or building official to determine whether the city or county requires that burglar bars be equipped with a release mechanism. The labeling and packaging must meet State Fire Marshal regulations.
- Requires that a contractor or installer provide warnings to the owner.

AB 3026

- Allows local governments to establish a specific date by which all residential property with security bars on bedroom windows must meet current state and local requirements for safety release mechanisms.
- Requires that real estate transactions disclose the presence of window bars, and whether they are equipped with quick-release mechanisms.

And yet nine more people died in a fire in East Palo Alto in 1997 because security/burglar bars prevented them from escaping.

As a result of these deaths State Senators Barbara Lee and Richard Polanco introduced SB 1405, which was signed by Governor Pete Wilson on September 22, 1998, and became effective on January 1, 1999.

SB1405

- Prohibits the sale of any bars in California that do not have the appropriate labeling and packaging information after August 1, 1998.
- Prohibits the installation of unopenable bars, under any conditions, where prohibited by the California Building Code after July 1, 1998.
- Allows only those bars and safety release mechanisms that have been tested by a State Fire Marshal approved laboratory be sold, distributed or installed after October 1, 1999. *(Amended to January 1, 2000)*
- Prohibits the installation or maintenance of burglar bars on any residential dwelling owned or leased by a public agency unless the bars meet current state and local requirements.
- Requires the State Fire Marshal to mount a public education effort on the dangers of illegal burglar bars, to the extent resources are available.

What can citizens do?

If you rent your home, contact your landlord and ask him or her to replace the illegal bars with approved quick release bars. If you receive no response, put your request to the landlord in writing and mail it. If you still receive no response, take a copy of your letter along with the landlord's address to your local building officials and ask for their help in enforcing the law. The California Building Officials, located in Sacramento, can help refer you to your local officials. They can be reached at (916) 457-1103.

If you own your home, replace any bars that do not have quick release mechanisms. Practice exit drills – your life and your family's lives could depend on it.



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www.fire.ca.gov

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